

JOHNS HOPKINS
UNIVERSITY CIRCULARS

Published with the approbation of the Board of Trustees

VOL. XVII.—No. 136.]

BALTIMORE, JULY, 1898.

[PRICE, 10 CENTS.]

GENERAL STATEMENTS AS TO THE COURSES OF INSTRUCTION.

The Johns Hopkins University will commence its twenty-third year of instruction on October 1, 1898. The work will go forward in these divisions:

The Graduate department, in which arrangements are made for the instruction of advanced students in the higher studies of literature and science;

The Undergraduate or Collegiate department, in which students receive a liberal education leading up to the degree of Bachelor of Arts;

The Medical department, in which students who have already received a liberal education are received as candidates for the degree of Doctor of Medicine, and in which Doctors of Medicine may attend special courses.

In other words, arrangements are made for the instruction of the following classes:

1. Graduate students and other qualified persons desiring to continue for one or more years their liberal education, and possibly to become candidates for the degree of Doctor of Philosophy;

2. Graduate students and other qualified persons wishing to proceed to the degree of Doctor of Medicine;

3. Doctors of Medicine who desire to follow special courses of lectures and laboratory work;

4. Undergraduates looking forward to the degree of Bachelor of Arts;

5. Special students who have not received an academic degree and are not candidates for a degree, but who desire to follow special courses of instruction in literature and science.

The medical department is open to women; the other departments are not.

A new academic building, called McCoy Hall, in commemoration of its donor, contains the library

and the class-rooms in language, literature, history, and philosophy.

Laboratories are provided in Chemistry, Physics, Electricity, Geology and Mineralogy, and in the Biological Sciences (Anatomy, Physiology, Zoölogy, and Pathology.)

Seminaries are organized in the Greek, Latin, French, German, English, Sanskrit, and Semitic languages, and also in History and Political Science. There are various scientific associations and journal clubs which hold regular meetings.

The Library contains eighty-five thousand volumes, part of which are kept in the central reading room, while the remainder of the books are distributed according to their subjects in the different laboratories and seminaries.

The Library of the Peabody Institute contains one hundred and thirty thousand volumes. These books are selected with reference to the wants of scholars. They are well chosen, well arranged, well bound, and well catalogued, and are accessible daily from nine in the morning until half-past ten in the evening.

The proximity of Baltimore to Washington enables the students to visit the libraries, museums, and scientific foundations of the Capital.

The academic year extends from the first of October to the fifteenth of June.

The charge for tuition is one hundred and fifty dollars per annum in the graduate and undergraduate departments, and two hundred dollars in the medical department.

The Annual Register, giving full statements as to the regulations and work of the University, and separate announcements of the Medical Courses, will be sent on application.

FACULTIES OF PHILOSOPHY AND MEDICINE.

DANIEL C. GILMAN, LL. D.,
President.

BASIL L. GILDERSLEEVE, PH. D., LL. D.,
Professor of Greek.

IRA REMSEN, M. D., PH. D., LL. D.,
Professor of Chemistry.

HENRY A. ROWLAND, PH. D., LL. D.,
Professor of Physics.

PAUL HAUPT, PH. D.,
Professor of the Semitic Languages.

WILLIAM H. WELCH, M. D., LL. D.,
Professor of Pathology and Dean of the
Medical Faculty.

SIMON NEWCOMB, PH. D., LL. D.,
Professor of Mathematics and Astronomy.

EDWARD H. GRIFFIN, D. D., LL. D.,
Professor of the History of Philosophy, and
Dean of the College Faculty.

WILLIAM OSLER, M. D., LL. D., F. R. S.,
Professor of Medicine.

HENRY M. HURD, M. D., LL. D.,
Professor of Psychiatry.

HOWARD A. KELLY, M. D.,
Professor of Gynecology.

HERBERT B. ADAMS, PH. D., LL. D.,
Professor of American and Institutional History.

WILLIAM K. BROOKS, PH. D., LL. D.,
Professor of Zoology.

MAURICE BLOOMFIELD, PH. D., LL. D.,
Professor of Sanskrit and Comparative
Philology.

THOMAS CRAIG, PH. D.,
Professor of Pure Mathematics.

A. MARSHALL ELLIOTT, PH. D., LL. D.,
Professor of the Romance Languages.

WILLIAM S. HALSTED, M. D.,
Professor of Surgery.

HARMON N. MORSE, PH. D.,
Professor of Analytical Chemistry.

MINTON WARREN, PH. D.,
Professor of Latin.

HENRY WOOD, PH. D.,
Professor of German.

EDWARD RENOUF, PH. D.,
Collegiate Professor of Chemistry.

JOHN J. ABEL, M. D.,
Professor of Pharmacology.

WILLIAM H. HOWELL, PH. D., M. D.,
Professor of Physiology.

FRANKLIN P. MALL, M. D.,
Professor of Anatomy.

JAMES W. BRIGHT, PH. D.,
Professor of English Philology.

WILLIAM HAND BROWNE, M. D.,
Professor of English Literature.

HERBERT E. GREENE, PH. D.,
Collegiate Professor of English.

WILLIAM B. CLARK, PH. D.,
Professor of Organic Geology.

JOSEPH S. AMES, PH. D.,
Professor of Physics.

WILLIAM D. BOOKER, M. D.,
Clinical Professor of Paediatrics.

JOHN N. MACKENZIE, M. D.,
Clinical Professor of Laryngology.

SAMUEL THEOBALD, M. D.,
Clinical Professor of Ophthalmology and Otology.

HENRY M. THOMAS, M. D.,
Clinical Professor of Neurology.

J. WILLIAMS LORD, M. D.,
Clinical Professor of Dermatology and
Instructor in Anatomy.

THOMAS C. GILCHRIST, M. B., M. R. C. S.,
Clinical Professor of Dermatology.

NICHOLAS MURRAY, A. B., LL. B.,
Librarian.

EDWARD H. SPIEKER, PH. D.,
Associate Professor of Greek and Latin.

LOUIS DUNCAN, PH. D.,
Associate Professor of Electricity.

ETHAN A. ANDREWS, PH. D.,
Associate Professor of Biology.

KIRBY F. SMITH, PH. D.,
Associate Professor of Latin.

ADOLPHE RAMBEAU, PH. D.,
Associate Professor of Romance Languages.

CHARLES L. POOR, PH. D.,
Associate Professor of Astronomy.

SIDNEY SHERWOOD, PH. D.,
Associate Professor of Political Economy.

JOHN M. VINCENT, PH. D.,
Associate Professor of History.

SIMON FLEXNER, M. D.,
Associate Professor of Pathology.

HARRY F. REID, PH. D.,
Associate Professor of Geological Physics.

J. WHITRIDGE WILLIAMS, M. D.,
Associate Professor of Obstetrics.

LEWELLYS F. BARKER, M. B.,
Associate Professor of Anatomy.

WILLIAM S. THAYER, M. D.,
Associate Professor of Medicine.

JOHN M. T. FINNEY, M. D.,
Associate Professor of Surgery.

LORRAIN S. HULBURT, PH. D.,
Collegiate Professor of Mathematics.

C. W. EMIL MILLER, PH. D.,
Associate Professor of Greek.

BERT J. VOS, PH. D.,
Associate Professor of German.

BOLLING W. BARTON, M. D.,
Lecturer in Systematic Botany.

PHILIP R. UHLER,
Associate in Natural History.

HERMAN S. HERING, B. S., M. E.,
Associate in Electrical Engineering.

GEORGE P. DREYER, PH. D.,
Associate in Biology.

CHRISTOPHER JOHNSTON, JR., PH. D.,
Associate in the Semitic Languages.

BERNARD C. STEINER, PH. D.,
Associate in History.

HERBERT G. GEER, M. E.,
Associate in Mechanical Engineering.

EDWARD B. MATHEWS, PH. D.,
Associate in Mineralogy.

WILLIAM W. RUSSELL, M. D.,
Associate in Gynecology.

HENRY J. BERKLEY, M. D.,
Associate in Neuro-Pathology.

ROBERT L. RANDOLPH, M. D.,
Associate in Ophthalmology and Otology.

JACOB H. HOLLANDER, PH. D.,
Associate in Economics.

WESTEL W. WILLOUGHBY, PH. D.,
Associate in Political Science.

THOMAS B. FUTCHER, M. B.,
Associate in Medicine.

WILLIAM J. A. BLISS, PH. D.,
Associate in Physics.

C. CARROLL MARDEN, PH. D.,
Associate in Romance Languages.

JOSEPH C. BLOODGOOD, M. D.,
Associate in Surgery.

THOMAS S. CULLEN, M. D.,
Associate in Gynecology.

ROSS G. HARRISON, PH. D.,
Associate in Anatomy.

THOMAS S. BAKER, PH. D.,
Associate in German.

JAMES C. BALLAGH, PH. D.,
Associate in History.

ABRAHAM COHEN, PH. D.,
Associate in Mathematics.

J. ELLIOTT GILPIN, PH. D.,
Associate in Chemistry.

REID HUNT, PH. D., M. D.,
Associate in Pharmacology.

HARRY C. JONES, PH. D.,
Associate in Physical Chemistry.

GEORGE C. KEIDEL, PH. D.,
Associate in Romance Languages.

LOUIS E. LIVINGOOD, M. D.,
Associate in Pathology.

S. EDWIN WHITEMAN,
Instructor in Drawing.

J. BASCOM CRENSHAW, PH. D.,
Instructor in Physical Culture.

MELVIN BRANDOW, A. B.,
Assistant Librarian.

HARRY L. WILSON, PH. D.,
Instructor in Latin.

ADOLPH G. HOEN, M. D.,
Instructor in Photo-Micrography.

FRANK R. SMITH, M. D.,
Instructor in Medicine.

HENRY B. JACOBS, M. D.,
Instructor in Medicine.

EDWARD C. ARMSTRONG, PH. D.,
Instructor in Romance Languages.

OLIVER L. FASSIG, S. B.,
Instructor in Climatology.

PHILIP OGDEN, PH. D.,
Instructor in Romance Languages.

GEORGE B. SHATTUCK, PH. D.,
Instructor in Geology.

HARVEY W. CUSHING, M. D.,
Instructor in Surgery.

GUY CARLETON LEE, PH. D.,
Instructor in Elocution and History.

JOHN B. WHITEHEAD, JR., A. B.,
Instructor in Applied Electricity.

RICHARD H. WILSON, PH. D.,
Instructor in Romance Languages.

In addition, there are a number of Assistants in the laboratories.

PROGRAMMES FOR 1898-99.

The following courses in literature and science are offered for the academic year which begins October 1, 1898. They are open to properly qualified young men, according to conditions varying somewhat in each department.

The Programme in MATHEMATICS and ASTRONOMY is given on page 81.

PHYSICS.

(Including Applied Electricity.)

Advanced Courses.

Lectures.

Professor ROWLAND will lecture on—

Electricity and Magnetism.

Four hours weekly, through the year.

These lectures constitute one-half of a complete course, which extends through two years. In the year 1899-1900, the lectures will be on Heat Conduction and Physical Optics.

Professor AMES will direct the *Physical Seminary*, which meets once a week through the year for the consideration of special subjects, and to which only the most advanced students are admitted, and will lecture on—

Elementary Mathematical Physics.

Two hours weekly, first half-year.

Theory of Elasticity.

Two hours weekly, second half-year.

These lectures are designed to be introductory to Professor Rowland's course, and students should take them during their first graduate year.

For all the advanced lectures a thorough knowledge of analytic geometry of three dimensions and of differential equations is necessary.

Laboratory Work.

Graduate students are expected to give as much of their time as possible to laboratory work. This consists at first in performing experiments which are designed to familiarize them with laboratory methods and with the use of instruments for exact measurements. When sufficient experience of this kind has been acquired, they undertake, under the guidance of the instructors, some research designed to be of permanent value.

Journal Meetings.

The instructors meet once a week with the advanced students for the reading and discussion of the current physical journals.

Among the journals on which reports are regularly given are the following: The Philosophical Magazine, The American Journal of Science, The Physical Review, The Astrophysical Journal, Wiedemann's Annalen and Beiblätter, Zeitschrift für physikalische Chemie, Journal de Physique, Annales de Chimie et de Physique, Nature, Comptes Rendus, London Electrician, the Proceedings of the Royal Society of London and of many other societies.

Collegiate Courses.

These courses are adapted to undergraduates and to those graduate students who wish to extend their knowledge of Physics but are not prepared for more advanced work.

First Year (Minor Course).

1. Lectures and recitations on General Physics.

Four hours weekly, through the year. Professor AMES.

2. Laboratory Work.

Three hours weekly, through the year. Professor AMES and Dr. BLISS.

This course does not assume that the student has had any previous acquaintance with physics; but he is supposed to know how to use logarithms, and to have had thorough instruction in plane trigonometry.

Second Year (Major Course).

1. Lectures and recitations on the following subjects:

Mechanics, including some simple problems in the motion of rigid and elastic bodies.

Thermodynamics.

Electricity and Magnetism.

Geometrical and Physical Optics.

Four hours weekly, through the year. Professor AMES.

2. Laboratory Work.

Five hours weekly, through the year. Professor AMES and Dr. BLISS.

This course presupposes at least one year's previous work in physics, and an accurate knowledge of analytic geometry of two dimensions and of the calculus.

The laboratory work of both courses accompanies the lectures throughout the year, and is largely quantitative, being designed to impress the principles of the subject and to impart experimental skill. In the second year, therefore, problems presenting greater difficulties, either experimental or theoretical, are assigned. Written reports of the work are required of all the students.

Applied Electricity.

The work in Applied Electricity is intended to give the students such a knowledge of the subject as will fit them to understand and appreciate the latest discoveries in electrical science, and to apply these to the practical electrical problems of the day. Especial attention is given to the electrical transmission of energy, electric traction, and alternating current work.

The course includes lectures, extending through two years, on theoretical and applied electricity, electrical measurements, steam and hydraulic engineering, central station equipment, machine design, mechanics of engineering, and practice in mechanical drawing. An important feature is laboratory work, to which much attention is paid, and original investigation is especially encouraged.

The instruction is given by LOUIS DUNCAN, Ph. D., Associate Professor of Electricity; HERMANN S. HERING, M. E., Associate in Electricity; HERBERT G. GEER, M. E., Associate in Mechanical Engineering; and JOHN B. WHITEHEAD, A. B., Assistant.

The course is primarily intended for college graduates. Students who have received the degree of Bachelor of Arts on completing the mathematical-physical group in this University, are admitted without examination. Graduates of other colleges are not examined for admission, but they must satisfy the instructors that they are prepared to take the course.

Candidates for admission must have completed the major and minor courses of this University (or their equivalents elsewhere) in physics and mathematics, the minor course in chemistry, and the course in freehand and instrumental drawing; and must be able to read either French or German. Those who have not had all this preparatory training must follow the courses in which they are deficient; only one of these may be taken simultaneously with the regular work of the course.

Persons, not college graduates, who wish to complete their preparation for the work in Applied Electricity, may be admitted to the requisite undergraduate courses, on passing an entrance examination covering the matriculation requirements in the following subjects: mathematics, French or German (first division), English, United States history, and the elements of one of the following branches of science—chemistry, botany, or physical geography. They will then follow for two years the preparatory courses in mathematics, physics, chemistry, and drawing referred to above.

A certificate of proficiency is given to those students who complete the prescribed course in a satisfactory manner, and who possess a knowledge of *both* French and German.

The course may be stated as follows:

First Year.

Applied Electricity.

Three times weekly, through the year. Dr. DUNCAN.

Lectures and examples on so much of the physical and mathematical theory of electricity and magnetism as is considered useful for application.

Electrical Measurements.

Twice weekly, through the year. Mr. HERING.

Lectures and recitations on the general methods of performing experiments and conducting tests, in which the fundamental measurements in electricity and magnetism and tests of electrical machinery are considered.

Electrical Seminary.

Weekly, through the year. Dr. DUNCAN, Mr. HERING, and Mr. GEER.

At these meetings the students of both classes review current electrical literature and present carefully prepared papers upon special topics in connection with their studies or their laboratory work.

Mechanics of Engineering.

Twice weekly, through the year. Mr. GEER.

Lectures and problems upon the strength of engineering materials, kinematics of machinery, and machine design, with especial reference to structural strength, arrangement, and utility of electrical machinery.

Mechanical Drawing.

Six hours weekly, through the year. Mr. GEER.

Machine sketches, precise representation, and detail drawing of electrical machinery. Kinematical problems solved graphically and machine parts inserted. Shop drawings of machine details from original designs. Tracing and blue-printing.

Laboratory Work.

Nine hours weekly. Dr. DUNCAN, Mr. HERING, and Mr. WHITEHEAD.

Exercises are given in fundamental experiments: the measurement of electro-motive force, current, resistance, self and mutual induction, capacity, hysteresis, permeability, etc., tests of batteries, dynamos, motors, incandescent and arc lamps, etc. The work is largely individual, and the character and grade of the work given to the student is determined by his qualifications.

Second Year.

Applied Electricity.

Twice weekly, through the year. Dr. DUNCAN.

Theory and design of dynamos and motors, transmission of energy, electric traction, telephone and telegraph, alternating apparatus, etc.

Electrical Seminary.

Weekly, through the year. Dr. DUNCAN, Mr. HERING, and Mr. GEER.

Steam and Hydraulic Engineering.

Three times weekly, through the year. Mr. GEER.

Lectures and examples upon steam engines and other heat motors (Fall term); steam boilers and accessories (Winter term); water power, water motors, and pumps (Spring term).

Central Station Equipment.

Twice weekly, second half-year. Mr. HERING.

Lectures and examples on the design, equipment and testing of electrical power stations, illustrated by personal inspection of large plants in operation and under construction.

Electro-chemistry and Electro-metallurgy.

About twenty lectures, second half-year. Dr. H. C. JONES.

Lectures on the wandering velocities of the ions, conductivity of solutions of electrolytes, calculation of the electromotive force of elements, and the more important methods employed in electro-metallurgy.

Theory of Alternating Current Machinery.

Twice weekly, through the year. Mr. WHITEHEAD.

Lectures and examples on the applications of the theory of alternating currents to the design and construction of apparatus.

Mechanical Drawing.

Six hours weekly, through the year. Mr. GEER.

Design and arrangement of parts, assembly and detail drawings of special problems as assigned during the first part of the year, and of dynamos and Central Stations, etc., prepared largely from the original designs of the students.

Laboratory Work.

Dr. DUNCAN, Mr. HERING, Mr. GEER, and Mr. WHITEHEAD.

The students are given original problems to work out in the laboratory, and experiments and investigations in alternating currents and transmission plants form an important part of the work. Encouragement will be given for the undertaking of original research.

Some time is devoted to work in steam engineering, including indicator practice, standardizing apparatus, calorimetry, hydraulics, etc.; and engine and boiler trials and tests of the University power plant are made.

CHEMISTRY.

The courses in Chemistry are intended to meet the wants (1) of graduate students who make Chemistry their specialty, or who select it as one of their subordinate subjects for the degree of Doctor of Philosophy; and (2) of undergraduate students who study Chemistry for general training. The first and second years' courses cover the ground of General Chemistry, as far as it is possible to do so in the time occupied. Together they form the full course designed for undergraduates. Graduates, including those who intend to enter the Medical School, who have not done an equivalent amount of work, will follow such parts of these courses as may seem desirable.

Advanced Work for Graduate Students.

Laboratory.

Under the direction of Professors REMSEN and MORSE. *Daily, except Saturday, from 9 a. m. to 5 p. m.*

The work will consist in a thorough study of analytic methods, in making typical preparations especially of compounds of carbon, and in carrying on investigations.

Lectures.

(a) Selected Topics, by Professor REMSEN. *Twice weekly, until Christmas.*

(b) Compounds of Carbon, by Professor REMSEN. *Four to five times weekly, from January 1 to the end of the year.*

(c) Analytic Methods and Inorganic Chemistry, by Professor MORSE. *Once weekly, through the year.*

(d) Physical Chemistry, by Dr. JONES. *Twice weekly, through the year.*

(e) Historical Topics, under the direction of the Professor of Chemistry, by advanced students. *About twelve lectures, second half-year.*

This work, while serving to familiarize students with chemical literature, is intended to aid them in acquiring the art of presenting subjects in the form of lectures before audiences. All those who intend to become teachers of Chemistry are expected to take active part in the work.

(f) *Journal Meetings.*—The instructors and advanced students will meet weekly, on Saturdays from 9 to 10.30 a. m., and at such other hours as may be appointed, for the purpose of hearing reports on the principal articles contained in the journals of Chemistry.

The reports are furnished in turn by all who attend the meetings. The journals read and regularly reported on are: *Annalen der Chemie*, *Berichte der deutschen chemischen Gesellschaft*, *Journal of the Chemical Society (London)*, *Journal für praktische Chemie*, *Zeitschrift für analytische Chemie*, *Zeitschrift für physikalische Chemie*, *American Chemical Journal*, *Journal of the Society of Chemical Industry*, *Bulletin de la Société chimique*, *Annales de Chimie et de Physique*, *Zeitschrift für anorganische Chemie*, and occasionally others.

Collegiate Courses.*First Year (Minor) Course.*

(a) Introduction to General Chemistry.

Lectures and recitations, four hours weekly, through the year, by Professor REMSEN, Professor RENOUF, and Dr. GILPIN.

(b) Laboratory Work.

Five to six hours weekly, through the year, under the direction of Professor RENOUF and Dr. GILPIN.

No previous knowledge of chemistry is required. The class-room work is based on Remsen's Chemistry (Briefer Course), and covers the field of inorganic chemistry, as far as possible. The last twenty class-room exercises give a sketch of organic chemistry, particularly for the benefit of those students whose study of chemistry is confined to the minor course. In the laboratory the student repeats the experiments performed in the class-room, and, in addition, has some practice in simple qualitative and quantitative analysis. Each student is required to keep a note-book of his work.

Second Year (Major) Course.

(a) Advanced Inorganic Chemistry.

Lectures and recitations, four hours weekly, until Christmas, by Professor RENOUF.

(b) Chemistry of the Compounds of Carbon.

Lectures and recitations, four hours weekly, from January 1 to the end of the year, by Professor MORSE.

(c) Laboratory Work.

Five to six hours weekly, through the year, under the direction of Professor RENOUF.

The class-room work in inorganic chemistry, in the major course, is confined to a study of the metallic elements and to analytical chemistry. The

laboratory work until January is systematic qualitative analysis; from January to the end of the year, the making of inorganic and organic preparations. The compounds to be made are so chosen that the student may become acquainted with as many classes and methods as possible.

GEOLOGY.

The instruction in Geology is under the direction of Dr. WM. BULLOCK CLARK, Professor of Organic Geology, assisted by Dr. HARRY FIELDING REID, Associate Professor of Geological Physics, Dr. EDWARD B. MATHEWS, Associate in Mineralogy and Petrography, Mr. OLIVER L. FASSIG, Instructor in Climatology, and Dr. GEORGE B. SHATTUCK, Instructor in Physiographic Geology. Dr. CHARLES L. POOR, Associate Professor of Astronomy, will give a course upon Exploratory Surveying, in conjunction with Dr. REID, and Mr. GEER, Associate in Mechanical Engineering, will offer a course in map drawing and coloring.

An important course of lectures will be given by Mr. BAILEY WILLIS, of the United States Geological Survey, Lecturer on Stratigraphic and Structural Geology, and a briefer course by Professor CLEVELAND ABBE, of the United States Weather Bureau, Lecturer on Meteorology.

The George Huntington Williams Memorial Lectureship upon the Principles of Geology was inaugurated during the session of 1896-'97 by Sir Archibald Geikie, Director-General of the Geological Surveys of Great Britain and Ireland. It is expected that the second course of lectures will be given during the coming session.

Courses are offered both to graduate and undergraduate students.

In the case of graduate students, the work is arranged to meet the wants (1) of those who desire to make Geology their principal subject for the degree of Doctor of Philosophy, and (2) of those who wish to select certain courses in Geology for one or both of their subordinate subjects, the major subject being taken in another department. Special arrangements may also be made by graduate students whose time is limited, or who desire to devote their attention to particular courses without reference to a degree.

In the case of undergraduate students, Geology may be taken either as one of the major or as one of the minor courses for the degree of Bachelor of Arts.

The courses in Geology consist of lectures, laboratory and field work, and conferences upon topics of current literature. Great importance is attached to laboratory training as a part of the geological course, and facilities are given for daily work from 9 a. m. to 5 p. m.

LECTURE COURSES.

1. General Geology, by Professor Clark and Dr. Shattuck. *Four times weekly.*
2. Paleontology, by Professor Clark. *Twice weekly.*
3. Historical Geology, by Professor Clark. *Twice weekly.*
4. Experimental Geology, by Associate Professor Reid. *Twice weekly, first half-year.*
5. Geological Physics, by Associate Professor Reid. *Twice weekly, second half-year.*
6. Exploratory Surveying, by Associate Professors Poor and Reid. *Twice weekly, for one-third year.*
7. General Mineralogy, by Dr. Mathews. *Four times weekly.*

8. Advanced Mineralogy, by Dr. Mathews. *Three times weekly.*

9. Petrography, by Dr. Mathews. *Three times weekly.*

10. Climatology, by Mr. Fassig. *Twice weekly for one-third year.*

11. Physiographic Geology, by Dr. Shattuck. *Twice weekly for one-third year.*

12. Geological Drawing, by Mr. Geer. *Once weekly.*

13. Stratigraphic and Structural Geology, by Mr. Willis. *Twice weekly for one-third year.*

14. Meteorology, by Professor Abbe.

15. Principles of Geology. (The George Huntington Williams Memorial Lectureship.)

These lectures will be announced later.

LABORATORY WORK.

Laboratory courses are arranged to accompany the lectures, while advanced or special students will be given the opportunity to carry on fuller investigations upon either described or new materials.

CONFERENCES AND STUDENT LECTURES.

In order that the advanced students may be kept in touch with the most recent investigations in the science, conferences are held at which the leading journals in geology are reviewed by the students under the direction of the instructors. The conferences take place bi-weekly.

In order that the advanced students may also have the experience necessary for the successful preparation and delivery of class-room lectures, a course upon some phase of geology is arranged, a special topic being assigned to each student. The lectures take place bi-weekly, alternating with the conferences.

FIELD WORK.

The area of the State of Maryland includes, notwithstanding its comparatively small size, a remarkable sequence of geological formations. The ancient rocks of the earth's crust, as well as those still in the process of deposition, are found, while between these wide limits there is hardly a geological epoch which is not represented. As a result, most excellent facilities are afforded for a study of the various geological horizons.

GEOLOGICAL CAMP.

Arrangements are made annually for a geological encampment of several weeks after the close of the class-room lectures at the University.

GEOLOGICAL LABORATORY AND LIBRARY.

The Geological Laboratory is situated in Hopkins Hall, and comprises over thirty rooms, large and small. Here are placed the library, apparatus and collections, which are accessible to the student daily from 9 a. m. to 5 p. m.

In accordance with the custom of the University, those books relating to the work of the Geological Department are given into its charge, the books of general reference being retained in the University Library.

The general library of the Geological Department contains a good representation of the leading journals and works of reference upon geological subjects. It is greatly enriched by the special Williams, Lewis and Abbe

libraries. Extensive series of topographical and geological maps likewise form a portion of the library, and these are constantly increasing in number.

APPARATUS AND COLLECTIONS.

The collections of the Department consist primarily of a large amount of important material brought together from Maryland and adjacent States. It represents all the horizons of the State, being especially rich in crystalline rocks, and in Cretaceous and Tertiary fossils. Some of this material has been already described while much awaits further study.

Among the most important of the special collections are:

The Williams collection of rocks and minerals, the Lewis collection of rocks and thin sections, the Krantz collection of fossils, the Hill collection of rocks and characteristic fossils from the Cretaceous formations of Texas, and the Sturtz, the Lehmann, and the Allen collections.

STATE SCIENTIFIC BUREAUS CONNECTED WITH THE GEOLOGICAL DEPARTMENT.

Two scientific bureaus, established by the Legislature and maintained at the expense of the State, are carried on in connection with the Geological Department. They are the Maryland Geological and Economic Survey, and the Maryland State Weather Service. Professor Clark is in charge of both of these organizations, which are concerned with a study of the geology, and physical features of the State of Maryland. A sum of \$27,000 annually is appropriated by the State for these bureaus.

BIOLOGY.

The courses in Biology are designed (1) for students who wish to make Zoölogy or Animal Physiology a subject of advanced study and research, or the principal or a subordinate subject for the degree of Doctor of Philosophy; (2) for graduates in medicine who desire a laboratory course in Physiology; (3) for undergraduates who desire some knowledge of the biological sciences as part of a liberal education; and (4) for undergraduates who desire to prepare themselves for the study of medicine.

The biological laboratory will be open daily during the session, except on Saturdays, from 9 a. m. to 5 p. m. The work goes forward under the direction of Professors BROOKS and HOWELL, and Dr. ANDREWS, Dr. DREYER, Dr. BARTON, and Dr. JOHNSON.

The marine laboratory is open for part of the year at some place on the sea-shore selected on account of its natural advantages for out-of-door study of animal life, and for the selection of material for original research in zoölogy, comparative anatomy, and embryology.

Graduate Courses.

For advanced students:

1. Professor Brooks will conduct the following courses:

Principles of Zoölogy.

Weekly, from January 1 to April 1.

Principles of Science.

A course of lectures, on the principles of science as illustrated by zoölogy, in October and November.

Advanced lectures in Zoölogy, by instructors and fellows.

Weekly, from January 1 to April 1.

Zoölogical Journal Club.*Weekly, to April 1.***Zoölogical Seminary.***Weekly, from the beginning of the session until April 1.***Marine Zoölogy.***Daily, in June and July.***2. Professor Howell will conduct the following courses :****Animal Physiology.***Four times weekly, throughout the year, with twelve weeks of laboratory work, five hours a week.*

This course is designed for the students in the medical school, but it, or an equivalent, will be required of students taking graduate work in animal physiology as a subsidiary subject for the Ph. D. degree.

Physiological Seminary.*Weekly, throughout the year.***Physiological Journal Club.***Weekly, throughout the year, for the discussion of the current journals.***Advanced laboratory work in Physiology (methods of demonstration and research).**

Arranged for those who have completed the elementary course in animal physiology. The work is done individually and not in class.

3. Dr. Andrews will conduct a course in Embryology during the winter.**4. Dr. Johnson will conduct the following courses :****The Comparative Morphology of the Vegetable Kingdom.***Twice weekly, throughout the year.***Botanical Seminary.***Twenty meetings during the year.***Herbaria.**

Captain John Donnell Smith, of Baltimore, has kindly consented to allow students to avail themselves of the opportunities offered in his private herbarium, which includes some 78,000 sheets of specimens from all parts of the world, and which is especially rich in its representation of the Flora of the United States and of the American tropics. He has also offered to special students the privilege of consulting his extensive botanical library.

Students of Botany have access also to the Schimper collection of European phanerogams, the Fitzgerald collection of mosses, and the local collection of the Baltimore Naturalists' Field Club.

Library Facilities.

The laboratory contains a library supplied with standard biological works and complete sets of the more important journals.

The general library of the University receives all the chief journals of general science, and the transactions of the leading learned societies of the world.

The library of the Peabody Institute, within five minutes' walk of the University, contains complete sets of many of the chief biological journals, of the proceedings of learned societies, and other works of reference.

In the libraries of the Medical and Chirurgical Faculty of Maryland and the Johns Hopkins Hospital a large number of medical periodicals are accessible to members of the University.

Publications.

The University Circulars provide for the prompt publication of abstracts of researches or parts of researches as soon as they are completed and ready for publication, and one number of the Circulars is, each year, devoted to notes from the laboratory.

The Studies from the Biological Laboratory have provided, in the past, for the publication of researches which have not required elaborate illustrations.

From time to time more extensive and elaborate memoirs have been issued by the University Press in a series of illustrated quarto Memoirs.

Collegiate Instruction.

The regular undergraduate instruction in normal biology extends over two years. The first year constitutes a *minor course* and may be taken separately.

Special students, who are not graduates or matriculates, may enter the courses for undergraduates, on giving satisfactory evidence of fitness.

In addition to valuable training of the powers of observation and thought, the courses in Biology present the science of life in its most fundamental aspects, and thus serve as a basis for the study of the phenomena of human existence dealt with in History, Political Economy, Psychology, and Ethics. They are open to all students, no previous training being required; and they will be found useful to those looking forward to a career in the ministry, to those designing to enter the medical profession, and to all who are interested in Natural History. In addition to the regular courses, the excursions of the Naturalists' Field Club, which are open to all, afford opportunities for a less formal study of Nature.

Minor Course.

(Required of all who wish to enter the medical school.)

General Biology.

Five to six hours laboratory work and four lectures and exercises weekly, throughout the year. Associate Professor ANDREWS, with the aid of Dr. BARTON and laboratory assistants.

In the laboratory, the student studies, with the aid of the microscope and dissections, the life-history and structure of certain animals and plants; the skeletons of man and animals; the development of the frog and the fowl; and the elements of systematic botany. In the lecture room, fundamental facts and laws are emphasized.

Major Course.

This course is designed for those having special interest in some branch of Biology.

Five to six hours laboratory work and four lectures or exercises weekly, throughout the year.

1. Zoology.

Till January 1. Professor BROOKS.

2. Animal Physiology and Histology.

From January 1 till April 1. Dr. DREYER.

3. Embryology.

From April 1 to the end of the session. Associate Professor ANDREWS.

Elective Course.**Zoology.**

Two hours weekly, through the year. Professor BROOKS and Associate Professor ANDREWS.

This is an elementary course to be taken without previous training. It includes excursions, collecting, use of the microscope, and dissection, with a general survey of the groups of animals.

It varies according to the needs of the students.

Elements of Botany.

An introduction to systematic Botany, given by Dr. BARTON in April and May, is open to any student, without previous training, as an equivalent of part of the course in free-hand drawing.

GREEK.

Greek Seminary.

Professor GILDERSLEEVE will conduct the Greek Seminary, the plan of which is based on the continuous study of some leading author or some special department of literature.

The Seminary consists of the director, fellows, and scholars, and such advanced students as shall satisfy the director of their fitness for an active participation in the work by an essay, a critical exercise, or some similar test of attainments and capacity. All graduate students, however, may have the privilege of attending the course.

During the next academic year the study of *Aristophanes and the Old Attic Comedy* will constitute the chief occupation of the members. There will be two meetings a week during the entire session, chiefly for the criticism and interpretation of the author, but auxiliary studies in the literary and political history of the period will also find place in the plan of the Seminary.

Advanced and Graduate Courses.

1. Professor Gildersleeve will also conduct a course of *Practical Exercises in Greek*, consisting chiefly in translation at dictation from Greek into English, and English into Greek, two meetings a week from the beginning of the session to the first of January.

2. He will give a series of *Readings in Aischylos, Sophokles, and Euripides*, once a week after January 1.

3. He will lecture once a week, during the session, on select chapters of *Greek Syntax and Greek Style*.

Arrangements will be made for the competent guidance of the private reading of advanced students; and a course of lectures on *Greek Metres*, with practical exercises, will be conducted by Associate Professor C. W. E. Miller.

The schedule given above is subject to additions and modifications.

The student should be provided with Bergk's or Meineke's complete text, von Velsen's critical edition so far as issued, and Kock's editions of the *Knights*, *Clouds* (translated by Humphreys), *Birds*, and *Frogs*, and Starkie's *Wasps* (Macmillan).

It is also desirable that the students should possess some edition of the *Fragmenta Comicorum Graecorum*, if possible Kock's, or, if that should be too expensive (48 marks), Meineke's smaller edition of the fragments, and for the study of the period, Thukydides, Xenophon's *Memorabilia* and *Hellenika*, and Plutarch's *Lives of Perikles and Alkibiades*.

Undergraduate Courses.

For Candidates for Matriculation.

Homer, *Iliad* (book vi); Herodotos (book vii); Sight Reading; Prose Composition.

Three hours weekly, through the year. Associate Professor MILLER.

Minor Course.

Xenophon, *Oikonomikos*.

Three hours weekly, first half-year. Associate Professor SPIEKER.

Private Reading: Plato, *Apology*.

Lysias, *Epitaphios*; Euripides (one play).

Three hours weekly, second half-year. Associate Professor SPIEKER.

Private Reading: Homer, *Odyssey* (books I, IX, X).

Prose Composition.

Weekly, through the year. Associate Professor SPIEKER.

Major Course.

Plato, *Protagoras*.

Three hours weekly, first half-year. Associate Professor SPIEKER.

Private Reading: Aischylos (one play).

Selections from the elegiac, melic, and iambic poets; Sophokles (one play).

Three hours weekly, second half-year. Associate Professor SPIEKER.

Private Reading: Aristophanes (one play).

Prose Composition.

Weekly, through the year. Associate Professor SPIEKER.

Elective Course.

Lucian, *Vera Historia*; Letter of James.

Two hours weekly, first half-year. Associate Professor SPIEKER.

LATIN.

Latin Seminary.

Professor WARREN will conduct the Latin Seminary. During the next academic year, the Orations and Letters of Cicero will form the centre of work. There will be two meetings a week during the entire session devoted to interpretation, to various auxiliary studies, and to the presentation of papers prepared by the members of the seminary. Analyses will be given of the more important orations. The letters will be taken up chronologically and in separate groups, and particular attention will be paid to the style of the letters of Cicero's correspondents.

Students are advised to provide themselves in advance with the Teubner edition of Cicero, edited by C. F. W. Müller (Part II, vols. 1, 2, and 3, contain the Orations, Part III, vols. 1 and 2, the Letters); and (for course 2 mentioned below) with F. Marx, *Incerti Auctoris de ratione dicendi ad C. Herennium Libri IV* (Teubner).

Advanced and Graduate Courses.

1. During the first half-year, Professor Warren will give a course of weekly lectures on subjects intimately connected with the work of the Seminary, such as the rise and decline of Roman Oratory, and the study of Rhetoric among the Romans.

2. During the first half-year, Professor Warren will also read with a class once a week the rhetorical treatise entitled *ad C. Herennium libri IV*.

3. Throughout the year he will lecture once a week on the Roman Forum and the Imperial Fora.

4. A Journal Club will meet regularly to report on current philological periodicals containing articles of interest to Latinists.

5. Associate Professor Kirby F. Smith will conduct throughout the year a course of practical exercises in Latin, consisting chiefly in translation at dictation from Latin into English and from English into Latin.

6. The subject of the Pro-Seminary to be conducted by Associate Professor Smith will be determined later.

7. A reading class will meet regularly once a week throughout the year, for rapid reading of Cicero in connection with the seminary work.

8. During the second half-year Dr. H. L. Wilson will give a course in the *Silvae* of Statius once a week.

The schedule above given is subject to additions and modifications.

Undergraduate Courses.*For Candidates for Matriculation.*Cicero (selected Letters); Sallust, *Catiline*.

Two hours weekly, first half-year. Dr. WILSON.

Ovid, *Heroides*; Vergil, *Georgics* (selections).

Two hours weekly, second half-year. Dr. WILSON.

Prose Composition.

Weekly, through the year. Dr. WILSON.

Minor Course.

Livy (two books).

Three hours weekly, first half-year. Dr. WILSON.

Private Reading: Caesar, *Bellum Civile* (book i); Suetonius, *Augustus*.

Horace (selections).

Three hours weekly, second half-year. Dr. WILSON.

Private Reading: Horace, *Ars Poetica*; Vergil, *Aeneid* (books IX, XII).

History of Roman Literature (with reading of selected passages).

Weekly, through the year. Associate Professor SMITH.

[For students in Group VI, as a substitute for Prose Composition.]

Prose Composition.

Weekly, through the year. Dr. WILSON.

Major Course.

Juvenal; Pliny.

Three hours weekly, first half-year. Associate Professor SMITH.

Private Reading: Quintilian (book X); Lucan (book VII).

Terence (one play); Plautus (one play).

Three hours weekly, second half-year. Associate Professor SMITH.

Private Reading: Plautus, *Miles Gloriosus*.

Prose Composition.

Weekly, through the year. Associate Professor SMITH.

Elective Course.

Selections from Tacitus.

Two hours weekly, second half-year. Associate Professor SMITH.

This course is designed primarily for students of the third year, whose knowledge of the language is somewhat advanced. It is proposed to read rapidly selections from the Annals and Histories of Tacitus.

The undergraduate courses in Latin vary somewhat according to the group of studies chosen, and the works which are read differ year by year, but it is intended that every student shall gain as wide a knowledge of the literature, and as intelligent an appreciation of those authors most typical of the great representative departments and periods of Roman life and thought, as is possible within the time at his command.

The authors prescribed for private reading are chosen either as supplementing the work of the class-room, or as leading the student into paths which otherwise he would be obliged to leave unexplored.

The importance of Latin prose composition is insisted upon as the best and most efficient method of acquiring that knowledge of the underlying principles of the language, without which an intelligent appreciation of the literature is impossible.

ORIENTAL SEMINARY.*Biblical Philology.*

1. Critical Interpretation of Selected Chapters of the Authorized Version.

Professor HAUP. Tuesday, 5 p. m.

2. Historical Geography of Palestine.

Dr. JOHNSTON. Friday, 10 a. m., during the second half-year.

3. History of Egypt.

Dr. JOHNSTON. Friday, 10 a. m., during the first half-year.

4. Elementary Hebrew.

Professor HAUP. Wednesday, 3-5 p. m.

5. Hebrew (Second Year's Course): Interpretation of the Book of Genesis.

Professor HAUP. Monday, 5 p. m.

6. Exercises in Reading Hebrew at Sight.

Dr. JOHNSTON. Weekly, through the year.

7. Hebrew Prose Composition.

Professor HAUP. Tuesday, 3.30 p. m.

8. Comparative Semitic Grammar.

Professor HAUP. Monday, 3 p. m.

9. Hebrew (Advanced Course): Critical Interpretation of the Book of Job.

Professor HAUP. Monday, 4 p. m.

10. Post-Biblical Hebrew (Selections from the Mishnah and the Talmud).

Mr. ROSENAU. Weekly, through the year.

11. Biblical Aramaic: Interpretation of the Aramaic portions of the Book of Ezra.

Professor HAUP. Wednesday, 5 p. m., during the first half-year.

Syriac and Ethiopic.

12. Syriac (Roediger's Chrestomathy).

Dr. JOHNSTON. Weekly, through the year.

13. Ethiopic.

Professor HAUP. Tuesday, 4 p. m., during the second half-year.

Arabic.

14. Arabic for Beginners.

Dr. JOHNSTON. Weekly, through the year.

15. Selected Suras of the Koran.

Dr. JOHNSTON. Weekly, through the year.

16. Arabic Prose Composition.

Professor HAUP. Tuesday, 3-3.30 p. m.

Assyriology.

17. Assyrian for Beginners.

Dr. JOHNSTON. Two hours weekly, through the year.

18. Epistolary Literature of the Assyrians and Babylonians.

Dr. JOHNSTON. Weekly, through the year.

19. Sumerian: Selected Bilingual Hymns and Incantations.

Professor HAUP. Tuesday, 4 p. m., during the first half-year.

SANSKRIT AND COMPARATIVE PHILOLOGY.

The following courses, in charge of Professor BLOOMFIELD, may be stated under two heads:

A. Indo-Iranian Languages.

1. Vedic Seminary: Hymns of the Rig-Veda, in the light of general Vedic criticism.

Weekly (1½ hours), through the year.

Under the methods of Vedic study pursued in this Seminary absolute restriction to any single Vedic document is precluded. The Vedas are studied as a unit: no conception or expression of a single text is regarded as satisfactorily understood, until it is tested in the light of the related conceptions in other parts of the Vedic literature. The hymns selected will

bear upon the most representative mythological and religious ideas of the earliest Vedic writings.

2. The language and literature of the Avesta, the Zoroastrian bible: advanced course.

Weekly, through the year.

3. The drama Çakuntala, with an introduction to the Prākṛit dialect of the dramas.

Weekly, through the year.

4. Selections from the Hitopadeśa, and the law-book of Manu (second year's course in classical Sanskrit).

Weekly, first half-year.

5. The elements of Vedic Philology: Vedic grammar and selected easy hymns.

Weekly, second half-year.

6. Beginner's course in Sanskrit: grammar and interpretation of an easy text.

Twice weekly, through the year.

B. *Linguistic Science and Comparative Grammar of the Indo-European Languages.*

7. The Elements of Linguistic Science, with an introductory account of the Ethnology of the Indo-European peoples.

Weekly, through the year.

8. The elements of Phonetics.

Weekly, first half-year.

9. Comparative Grammar of Greek, Latin, German, and Sanskrit. The history of the vowels, and their *ablaut*-relations.

Weekly, through the year.

10. The Lithuanian Language and Literature: advanced course.

Weekly, through the year.

No knowledge of Sanskrit is required for any of the courses under B. Course 7 sketches briefly the history of the science of language; presents a concise account of the ethnological history of the Indo-European (Aryan) peoples; deals with the fundamental questions of growth and change in language; and finally treats of the origin of language. Course 8, offered for the first time in this department, will be carried on in practical conferences, for the purpose of familiarizing students of language and philology in general with the nature of spoken sounds. Course 9 is intended as an introduction into the most elementary methods and results of the comparative grammar of the more important Indo-European languages.

ENGLISH.

A.

Professor BRIGHT will conduct the following courses:

I.

English Seminary.

Graduate students are admitted to the Seminary as soon as they have satisfied initial requirements for independent research. The discipline of the Seminary is designed to impart training in scholarly methods of dealing with literary and linguistic problems. Study and investigation are bestowed upon selected periods of literary history, upon departments of literature extending through successive periods, and upon the works of important writers, separately or in groups. Usually there is a change of subject each half-year.

The following subjects are announced for the academic year beginning October 1, 1898: (a) English Dramatic Literature

before Shakespeare (*first half-year*); (b) The Prose Literature of the Anglo-Saxon Period (*second half-year*).

The meetings of the Seminary will occupy four hours a week. *Tuesday and Thursday, 3-5 p. m.*

II.

Lectures on the History of the English Language. *Tuesday, 12 m. and Wednesday, 4 p. m., first half-year; Wednesday, 4 p. m., second half-year.*

III.

The Interpretation of Texts: (a) The Poems of Shakespeare. *Thursday, 12 m., first half-year; (b) The Ormulum, King Horn, and Havelok the Dane. Tuesday and Thursday, 12 m., second half-year.*

IV.

The English Journal Club (*fortnightly, two hours*), for reports on the current journals, reviews of new books, and the presentation and discussion of original papers on linguistic and literary subjects.

V.

An introductory course in Anglo-Saxon, with Bright's Anglo-Saxon Reader as the text-book. *Monday and Wednesday, 12 m.*

B.

Professor BROWNE will give the following courses in English Literature:

VI.

A general course covering the whole field, from the 7th to the 19th century. The study, of course, is synoptical; but emphasis is laid upon the chief writers and most important periods. Morley's *Manual* (Tyler's edition) is used as a text-book. *Wednesday and Thursday, 1 p. m.*

VII.

A course in the writers of the 12th, 13th, and 14th centuries (from the Peterborough Chronicle to Chaucer). The texts are read from Morris and Skeat's *Specimens*, the students beginning with the easier and proceeding to the more difficult. In addition to the knowledge thus acquired of an interesting and formative period of our literature, this introduction to the early forms of the language will be found a helpful prodromus to the study of Anglo-Saxon. *Monday and Tuesday, 1 p. m.*

VIII.

A course in the writers of the Elizabethan period. The origin and development of the English drama will be traced from its earliest recorded beginnings down to Shakespeare, the representative of its highest perfection, and in its decadence in the later Jacobean dramatists. *Tuesday, 12 m., first half-year.*

IX.

A course in the literature of the 14th century, with special reference to Chaucer and Langland. *Tuesday, 12 m., second half-year.*

X.

The Early Scottish Poetry from Barbour (A. D. 1350) to Lyndsay (A. D. 1550) will be studied by the aid of a chrestomathy especially prepared for this class. A course of historical and critical lectures will be given concurrently with the readings. *Friday, 12 m.*

XI.

Lectures, for advanced students, on the Art of Criticism, and on some significant period of English Literature. *Wednesday, 11 a. m.*

C.

Professor GREENE will give the following courses in Rhetoric and English Literature:

XII.

Rhetoric and English Composition. Theory, based upon textbooks, lectures, and discussions; critical study of prose writers; frequent practice in writing. *Monday, Tuesday, and Wednesday, 12 m.*

XIII.

English Literature. Outline history, with special study of the more important writers. *Monday, 9 a. m., Tuesday, 10 a. m., Wednesday, 11 a. m.*

XIV.

Special study of the literature of the eighteenth and nineteenth centuries. *Twice weekly.*

NOTE.—Courses I–IV, XI, are for graduate students.

Courses VI and VII constitute the "English Minor," and V, VIII, IX, and X, the "English Major," of Group VII.

Course XII is prescribed for all college students during their first year; XIII is prescribed for the second year; and XIV is elective in the third year.

GERMAN.

German Seminary.

The German Seminary will be conducted by Professor WOOD. The subject for the first half-year will be 'Storm and Stress' and Early Romanticism. These two themes will be studied as parts of one continuous development in German literature. Goethe, Lenz, Klinger, Tieck, and the Schlegels will receive particular attention. During the second half-year, the Middle High German Lyric will be studied in the poems of Walther von der Vogelweide. The Seminary will meet three times weekly, through the year.

Students are requested to procure *Stürmer und Dränger*, Deutsche National-literatur, hrsg. J. Kürschner, Bände 79–81, Stuttgart; Wilmanns, *Gedichte Walthers von der Vogelweide*, 2. Ausgabe (Germanistische Handbibliothek I), Halle, 1883; Lachmann, *Gedichte Walthers*, 5. Ausgabe, Berlin, 1875; Wilmanns, *Leben und Dichten Walthers*, Bonn, 1882; Burdach, *Reinmar der Alte und Walther von der Vogelweide*, Leipzig, 1880.

The Germanic Society, which is composed of the Director of the Seminary, the Instructors, and the Graduate Students in German, will meet fortnightly in an evening session. The members report upon the contents of current journals, and present, in turn, papers upon subjects connected with the work of the year, or assigned for investigation.

Graduate Courses.

Professor WOOD will conduct the following courses:

1. Gothic and the Elements of Comparative German Grammar. *Twice weekly, through the year.*

Braune, *Gotische Grammatik*, 4. Auflage, Halle, 1895; Kluge, *Vorgeschichte der altgermanischen Dialekte* (Sonderabdruck aus der 2. Auflage von

Paul's *Grundriss der germanischen Philologie*), Strassburg, 1897; Heyne's *Ulfilas*, 9. Auflage, von F. Wrede, Paderborn, 1896.

2. Old Norse. *Weekly, first half-year; twice weekly, second half-year.*

Holthausen, *Altisländisches Elementarbuch*, Weimar, 1895 (*Lesebuch*, Weimar, 1896); Noreen, *Altisländische Grammatik*, 2. Auflage, Halle, 1892; Noreen, *Abriss der urgermanischen Lautlehre*, Strassburg, 1894.

3. Old High German. Otfrid. *Weekly, through the year.*

Erdmann, *Otfrids Evangelienbuch*, Halle, 1882; Kelle, *Geschichte der deutschen Literatur*, Band I., Berlin, 1892.

Dr. B. J. VOS, Associate Professor of German, will give the following courses:

4. Middle High German. *Twice weekly, first half-year.*

Paul, *Mittelhochdeutsche Grammatik*, 4. Auflage, Halle, 1894; Helmbrecht, ed. Keinz, 2. Auflage, Leipzig, 1887; Lexer, *Mittelhochdeutsches Taschen-Wörterbuch*.

5. Middle Dutch. *Twice weekly, first half-year.*

Franck, *Mittelniederländische Grammatik mit Lesestücken und Glossar*; te Winkel, *Geschichte der niederländischen Sprache und Literatur* (Paul's *Grundriss I and II*).

6. History of Rime in Old and Middle High German. Lectures. *Weekly, second half-year.*

W. Grimm, *Zur Geschichte des Reims*, Berlin, 1852.

7. Vondel as Lyric Poet. *Weekly, second half-year.*

Vondel, ed. van Lennep-Unger, Leiden, 1888–91; Jonckbloet, *Geschiedenis der Nederlandsche Letterkunde in de zeventiende eeuw, vierde druk*; twee deelen, Groningen, 1887–91; G. Kalf, *Vondels Leven*, Haarlem, 1896; van Helten, *Vondel's Taal*, Groningen, 1883.

Dr. T. S. BAKER will give the following courses:

8. Opitz, and the New Poetry of the 17th Century. *Weekly, through the year.*

Ausgewählte Dichtungen von Martin Opitz, hrsg. von J. Tittmann, Leipzig, 1869; *Gedichte von G. R. Weckherlin*, hrsg. von K. Goedeke, Leipzig, 1875.

9. Contemporary German Drama. *Weekly, through the year.*

Wildenbruch, Sudermann, Hauptmann, *die freie Bühne*. Scandinavian and French influence.

Undergraduate Courses.

For Candidates for Matriculation.

Elementary German:

Thomas, *Practical German Grammar*; Meissner, *German Conversation*; Super, *Elementary German Reader*; E. S. Buchheim, *Short German Plays*.

Three hours weekly, through the year. Dr. Vos.

This course is intended for students who offer Greek for matriculation. Those who follow it are required to take Minor A in their groups.

Minor Course.

Class A:

Classics: Schiller, *Maria Stuart*; Goethe, *Hermann und Dorothea*.

Two hours weekly, through the year. Dr. Vos.

Prose Readings: Chamisso, *Peter Schlemihl*; von Wildenbruch, *Das edle Blut*.

Weekly, through the year. Dr. Vos.

Prose Composition.

Weekly, through the year. Professor WOOD.

Private Reading: Freytag, *Doktor Luther*.

Class B:

Otis, *Elementary German*; Brandt, *German Reader*; von Moser, *Der Bibliothekar*; Goethe, *Egmont*; Prose Composition (E.

S. Buchheim, *Elementary German Prose Composition*, Oxford, 1893; Whitney, *German Grammar*.

Four hours weekly, through the year. Dr. BAKER.

Minor Course B is intended only for students who have matriculated in Greek, and have fully met at entrance the matriculation requirements; for such students, it absolves the requirements in German. Other students must absolve Minor A.

Major Course.

Drama.

Goethe, *Faust*. Professor WOOD. Schiller, *Wallensteins Lager*, *Die Piccolomini*. Dr. VOS.

Two hours weekly, through the year.

History of German Literature.

Weekly, through the year. Professor WOOD and Dr. VOS.

Prose Composition.

C. A. Buchheim, *Materials for German Prose Composition*, Parts I and II, London, 1894.

Weekly, through the year.

Private Reading: Schiller, *Wallensteins Tod*.

NOTE.—Beginning with the session 1898–99, all class exercises in the German Major Course will be held at 11 a. m.

Elective Courses.

Contemporary Literature, in Rapid Readings.

Works by Hauptmann, Sudermann, Ebner-Eschenbach, and von Wildenbruch are read.

Two hours weekly, through the year. Dr. BAKER.

This course is intended for students who have completed the equivalent of a Minor.

Readings in Natural Science.

Brandt and Day, *German Scientific Reading*; Cohn, *Über Bakterien, die kleinsten lebenden Wesen*.

Two hours weekly, through the year. Dr. BAKER.

Special Courses.

Scientific German.

Dippold, *Scientific German Reader*; von Helmholtz, *Über Goethe's naturwissenschaftliche Arbeiten*.

Twice weekly. Dr. HOFMANN.

This course is open to graduate students who already possess an elementary knowledge of German, and wish to acquire greater fluency in reading. Successful completion of the course is accepted as an equivalent of the reading knowledge of German required of candidates for the degree of Doctor of Philosophy.

Oral Exercises in German.

Weekly. Dr. HOFMANN.

This course is intended especially for students in the departments of modern languages, who lack an extended vocabulary and sufficient familiarity with written and spoken German. A thorough knowledge of the elements is presupposed.

ROMANCE LANGUAGES.

Advanced Courses.

I. With second and third year students:

Professor ELLIOTT.

(a). Seminary. *Twice weekly*.

The Fables of Marie de France; Work on Manuscripts.

(b). French Dialects. *Weekly*.

(c). Lectures on Dante. *Weekly*.

(d). Romance Club. *Weekly*.

Professor F. M. WARREN.

(e). The Epic of Antiquity. *Twenty lectures in the month of February*.

(f). Realism and Naturalism. *Eight public lectures*.

[I. Beginnings of Realism in antecedent literature; II. Stendhal. *Mérimée*; III–IV. Balzac; V. Naturalism. Flaubert; VI. The De Goncourts. Baudelaire; VII. Daudet. Dumas Fils; VIII. Zola.]

Dr. MARDEN.

(g). Spanish Philology. *Twice weekly*.

Gorra, *Lingua e Letteratura Spagnuola delle Origini*; Baist, *Die Spanische Sprache* (in Gröber's *Grundriss der Romanischen Philologie*); Meyer-Lübke, *Grammaire des Langues Romanes*, vols. I, II.

(h). Old Spanish Readings. *Weekly*.

Gorra, *Lingua e Letteratura Spagnuola delle Origini*; Lidforss, *Los Cantares de Myo Cid*; Janer, *Poetas Castellanos anteriores al Siglo XV*.

(i). Lectures on the beginnings of Spanish literature. *Weekly*.

II. With first year students:

Professor ELLIOTT.

(a). Popular Latin. *Weekly*.

Associate Professor RAMBEAU.

(b). Phonetics and French pronunciation, with practical exercises. *Weekly, second half-year*.

A. Rambeau and Jean Passy, *Chrestomathie française*, Holt, New York, 1897; Paul Passy, *Les sons du français*, 4th edition, 1895.

Dr. ARMSTRONG.

(c). Old French Phonology and Morphology. *Three hours weekly*.

Schwan-Behrens, *Grammatik des Altfranzösischen*; Suchier, *Le Français et le Provençal*; Suchier, *Altfranzösische Grammatik*; Körting, *Lateinisch-romanisches Wörterbuch*.

(d). French Physiological Phonetics. *Weekly*.

Passy, *Les sons du français*; Beyer, *Französische Phonetik*; Sweet, *Primer of Phonetics*; Victor, *Elemente der Phonetik*; Michaelis and Passy, *Dictionnaire Phonétique de la Langue Française*.

(e). Italian Philology. *Twice weekly*.

Meyer-Lübke, *Italianische Grammatik*; Meyer-Lübke, *Grammaire des Langues Romanes*; Caix, *Origini della Lingua Poetica Italiana*.

Dr. KEIDEL.

(f). Methodology of the Romance Languages. *Weekly, first half-year*.

(g). Paleography. *Weekly, second half-year*.

Dr. OGDEN.

(h). The development of the French novel in the nineteenth century. *Weekly*.

Dr. R. H. WILSON.

(i). Historical French Syntax. *Twice weekly*.

(j). Old French Readings. *Twice weekly*.

Barisch and Horning, *La Langue et la Littérature Françaises*; Paris, *Extraits de la Chanson de Roland*; Koschwitz, *Pèlerinage de Charlemagne*; Suchier, *Aucassin et Nicolette*; Warnke, *Die Lais der Marie de France*; Hofmann, *Amis et Amiles*.

Undergraduate Courses.

Associate Professor RAMBEAU.

French: *Second Year (Major) Course*.

1. Outline of the History of French Literature from the beginnings to the XIXth century, especially the XVIIIth century; study of Classical Tragedy and Comedy.

Rapid reading of Corneille, Racine, and especially Molière. *Twice weekly.*

2. Literature of the XIXth century, especially the Romantic Movement.

Victor Hugo, *Les Travailleurs de la mer*, *Notre-Dame de Paris*, *Ruy Blas*; Modern Lyrics: Béranger, Lamartine, Victor Hugo, Alfred de Musset, the *Parnassiens*. *Weekly.*

Private reading to be announced later.

3. Prose Composition.

Study of idioms and original essays with reference to subjects and authors read in the class. *Weekly.*

French: *First Year (Minor) Course: Class A.*

1. Short outline of the History of French Literature (XVII-XIX centuries), and reading of Contes, Novels, and Dramas.

Coppée, *Contes (on rend l'argent, etc.)*; Mérimée, *Colomba*; Molière, *Le Bourgeois gentilhomme*; Hugo, *Hernani*; Béranger, *Chansons*. *Twice weekly.*

2. Modern French Comedy.

Scribe and Legouvé, *Bataille de dames*; Augier, *La Pierre de touche*; Pailleron, *Le Monde où l'on s'ennuie*. *Weekly.*

Private reading to be announced later.

3. Prose Composition and Syntax.

Bevier's Grammar with Exercises by Logie, and Exercises based on *Colomba*, ed. Kimball. *Weekly.*

Dr. OGDEN.

French: *First Year (Minor) Course: Class B.*

Whitney's *Brief French Grammar*; Exercises in Grammar and Composition; Exercises in Prose Composition based on texts used; Super's *French Reader*; Dumas, *L'Évasion du Duc de Beaufort*; Mérimée, *Colomba*; Augier, *Le Gendre de M. Poirier*.

For undergraduates who have matriculated in Greek, and for graduates beginning French. *Four hours weekly.*

Dr. ARMSTRONG.

French: *Elementary Course.*

Whitney's *Brief French Grammar*; Super's *French Reader*; Jules Verne, *L'Expédition de la Jeune-Hardie*; Alfred de Musset, *Pierre et Camille*.

For candidates for matriculation who offer Greek. *Three hours weekly.*

Dr. KEIDEL.

French: *Elective Course.*

Loti, *Pêcheurs d'Islande*; Theuriet, *Le Mariage de Gérard*; selected stories by Coppée, Daudet, Theuriet, and others.

For students who have completed the equivalent of a Minor. *Twice weekly.*

Associate Professor RAMBEAU.

Italian: *Minor Course. Four hours weekly.*

Grandgent's Italian Grammar and Composition.

Fornaciari, *Sintassi italiana*; Fornaciari, *Disegno storico della letteratura italiana*; Guarnerio, *Manuale di versificazione italiana*.

Manzoni, *I Promessi Sposi*; De Amicis, *Cuore*, ed. Kuhns, and other novels; Verga, *Vita dei campi*; Serao, *All'erta, sentinella!*; Floscolo, *Liriche scelte* (ed. Ferrari); a comedy of Goldoni; a tragedy of Alfieri; selections from Tasso's *Gerusalemme liberata* and Dante's *Divina Commedia*.

Dr. WILSON.

Italian: *Elective Course. Twice weekly.*

Del Testa, *L'Oro e l'Orpello*; De Amicis, *Alberto, Camilla*; Farina, *Fra le Corde d'un Contrabbasso*; Barrili, *La Donna di Picche*; Verga, *Cavalleria Rusticana*; Capuana, *Homo*.

Dr. MARDEN.

Spanish: *Minor Course. Four hours weekly.*

Manning's *Spanish Grammar*; Matzke's *First Spanish Readings*; Caballero, *La Familia de Alameda*; Alarcon, *El Sombrero de Tres Picos*; Bretón, *La Independencia*.

Spanish: *Elective Course. Twice weekly.*

Manning's *Spanish Grammar*; Matzke's *First Spanish Readings*; Palacio Valdés, *José*.

HISTORY, POLITICS, AND ECONOMICS.

HISTORY.

Professor HERBERT B. ADAMS:

1. Historical Seminary.

Alternate Friday evenings. For graduates only.

2. Germanic History.

Two hours weekly, first half-year. For graduates.

3. Early English History.

Two hours weekly, second half-year. For graduates.

4. History of the Nineteenth Century.

One hour weekly, first half-year. For graduates.

5. History of Education.

One hour weekly, second half-year. For graduates.

6. History of Civilization.

Two hours weekly, through the year. Designed for undergraduates, open to graduates.

Associate Professor J. M. VINCENT:

1. Social and Economic History of the Middle Ages.

Two hours weekly, first half-year. For graduates.

2. Early Modern History of Europe.

Two hours weekly, second half-year. For graduates.

3. Historical Conference. Practical exercises in historical research.

Two hours fortnightly, through the year. For graduates.

4. European History from 800 A. D. (Major Course).

Two hours weekly, through the year.

5. Historical Politics (History-Economic Course).

Two hours weekly, through the year. Required of all undergraduates.

Dr. BERNARD C. STEINER, Associate in History:

American Political and Constitutional History.

Two hours weekly, through the year. For undergraduates.

Dr. J. C. BALLAGH, Associate in History:

1. Classical and Early European History.

Four hours weekly, through the year. For undergraduates.

2. American Economic History.

One hour weekly, through the year. For graduates only.

3. Southern History.

One hour weekly, through the year. For graduates.

4. Local and Municipal Government.

One hour weekly, through the year. For graduates.

5. Oral Examinations in History.

One hour weekly, through the year. For graduates.

Dr. JAMES SCHOUER:

American Political History.

Twelve lectures, in January and February, 1899.

Dr. JOHN H. LATANÉ:

American Diplomatic History.

Twenty-five lectures. For graduates only.

Dr. GUY CARLETON LEE, Instructor in History:

1. English Political and Constitutional History.

Two hours weekly, through the year. For undergraduates.

2. Parliamentary Law and Procedure.
Two hours weekly, through the year. For undergraduates.
3. Public Speaking and Class Debates.
Six hours weekly, through the year. For undergraduates.

ECONOMICS.

Associate Professor SIDNEY SHERWOOD :

1. Economic Conference and Journal Club.
Two hours weekly, through the year. For graduates.
2. Corporations.
Two hours weekly, first half-year. For graduates.
3. Money.
Two hours weekly, second half-year. For graduates.
4. Legal Aspects of Economics.
One hour weekly, through the year. For graduates.
5. Elements of Economics.
Two hours weekly, first half-year. Required of all undergraduates.
6. Recent Economic Theories.
Two hours weekly, second half-year. Designed for undergraduates, open to graduates.

Dr. J. H. HOLLANDER, Associate in Economics :

1. Development of Economic Theories since Adam Smith.
Two hours weekly, first half-year. For graduates.
2. History and Theory of Industrial Crises.
Two hours weekly, second half-year. For graduates.
3. Recent Economic Changes.
Two hours weekly, first half-year. For graduates and undergraduates.
4. History of Economic Thought.
Two hours weekly, first half-year. For undergraduates in Group VI.
5. International Trade and Socialism.
Two hours weekly, second half-year. For undergraduates in Group VI.
6. Money and Taxation.
Two hours weekly, second half-year. Required of all undergraduates.

Dr. H. L. MOORE, Professor of Economics, Smith College :
Trusts.

Twelve lectures in January. For graduates only.

POLITICS.

Dr. W. W. WILLOUGHBY, Associate in Political Science :

1. History of Modern Political Philosophy.
Two hours weekly, first half-year. For graduates only.
2. Labor Legislation and its Judicial Interpretation.
Two hours weekly, second half-year. For graduates.
3. American Constitutional Law.
Two hours weekly, through the year. For graduates.
4. Political Conference.
Two hours fortnightly, through the year. For graduates.

PHILOSOPHY.

The undergraduate courses in Philosophy provide five hours per week of work for one year, under the direction of Professor GRIFFIN. All candidates for the degree of Bachelor of Arts are required to follow them during the last year of residence.

1. Deductive and Inductive Logic.

Attention is given to the general theories of Deduction and Induction; to the forms of thought—*notion, judgment, and reasoning*; to the application of the rules of the syllogism and the detection of fallacies; and to the methods of scientific investigation and proof.

Jevons's *Elementary Lessons in Logic* and Fowler's *Elements of Inductive Logic* are used as text-books, with references to the works of Mill, Bain, Keynes, and other writers.

Four hours weekly, until Christmas.

2. Psychology.

The instruction in psychology is intended to give a general view of the results of the present methods of study, the investigations in regard to the quality and intensity of sensations, the duration of psychic acts, etc.,—in general, the subjects treated in Part II of Ladd's *Physiological Psychology*—being presented with sufficient detail to render them intelligible and interesting. A series of lectures and demonstrations on the anatomy and physiology of the nervous system—given in 1897-98 by Dr. L. F. Barker—is included in the course.

Especial emphasis is laid upon the facts of conscious experience as known through introspection, the most important end to be secured being, it is believed, such an understanding of the facts and laws of mental life as shall fit one for wise self-government and effective influence. With this view, such powers and states of mind as attention, memory, association, habit, imagination, the feelings, the will, are discussed in as concrete and practical a way as possible. A text-book is used as a basis of instruction, but this is largely supplemented by informal lectures, and by references to various authorities.

Baldwin's *Elements of Psychology*, Sully's *Human Mind*, James's *Psychology*, Hödding's *Outlines of Psychology*, Dewey's *Psychology*, Hamilton's *Lectures on Metaphysics*, Porter's *Human Intellect*, Spencer's *Principles of Psychology*, Ladd's *Physiological Psychology*, are used as books of reference. One essay on an assigned subject is required from each member of the class.

Four hours weekly, during January; five hours, from February 1 to April 1.

3. Ethics.

The fundamental problems of ethics and the application of moral principles to the guidance of conduct and the formation of a manly character are considered, with special reference to the Christian theory of morals. The great historic systems—*hedonism, utilitarianism, intuitionism*—and the relation to ethical theory of the doctrine of evolution, are discussed with the purpose of enabling the student to reach a just and intelligent view of the grounds and nature of moral obligation. The aim is to make the instruction of a directly practical nature, and to show the bearing of the problems considered upon questions of practical ethics.

The subject is taught by lectures, recitations from a text-book—Fowler's *Principles of Morals*, Part II, being used at present—and references to the works of Calderwood, Janet, Spencer, Martineau, Sidgwick, Stephen, Martensen, and other writers. One essay is required from each member of the class.

Five hours weekly, after April 1.

4. History of Philosophy.

Outline of Greek Philosophy.

Weekly, first half-year.

Outline of Modern Philosophy. [Optional Course.]

Weekly, second half-year.

For next year the following advanced courses in Philosophy are offered :

1. Modern Philosophy from Descartes to Kant.

Weekly, through the year. Professor GRIFFIN.

2. Modern Ethical Theories.

Fortnightly. Professor GRIFFIN.

MATHEMATICS AND ASTRONOMY.

During the coming year, Professor Simon Newcomb, LL. D., F. R. S., lately Director of the U. S. Nautical Almanac, will resume his superintendence of the work in Mathematics and Astronomy in this University. At the beginning of the session, and subsequently whenever desired, he will meet those students who desire his counsel in respect to the courses that they may follow. He will be especially interested in promoting the work of any student who desires to pursue an advanced course of study in Celestial Mechanics.

Near the beginning of the year, Professor Newcomb hopes to give a short course of lectures on the Encyclopædia of Mathematical Sciences,—a course which will be open to graduate students in Physics and Astronomy as well as to those in Mathematics.

The principal courses of systematic instruction in Mathematics will be given by Professor Craig, by Dr. Hulburt, Collegiate Professor, and by Dr. Cohen, Associate in Mathematics.

The systematic courses in Astronomy will be given by Associate Professor Poor.

A. Advanced Mathematics.

In advanced mathematics the courses below named, intended for graduate students, will be given:—

Professor CRAIG.

1. Theory of Surfaces. (*Minima Surfaces, Weingarten Surfaces, Surfaces of Constant Negative Curvature, Deformation of Surfaces.*)

Three times weekly, through the year.

2. Advanced Theory of Functions and Differential Equations.

Three times weekly, through the year.

3. Mathematical Conference.

Weekly, through the year.

Dr. COHEN.

1. Elementary Theory of Functions.

Twice weekly, through the year.

2. Theoretical Mechanics.

Twice weekly, through the year.

3. Substitution Groups.

Twice weekly, first half-year.

4. Elliptic Functions.

Three times weekly, second half-year.

B. Astronomy.

Dr. POOR offers the following courses:

1. Minor Course in Spherical and Practical Astronomy.

Twice weekly, through the year.

This course is intended for those beginning the subject. The lectures embrace the elements of spherical astronomy and the use of the ephemeris; the required laboratory work includes the use of the sextant, altazimuth, and the transit instrument.

2. Advanced Course in Spherical and Practical Astronomy.

Twice weekly, through the year.

This course includes special problems in spherical astronomy and the theory and use of astronomical instruments. The laboratory work includes the use of the meridian circle and the equatorial.

3. Theoretical Astronomy.

Twice weekly, through the year.

This course includes an elementary treatment of gravitational astronomy and of the methods of computing orbits, ephemerides, and special perturbations.

4. Special Problems in Theoretical Astronomy.

Twice weekly, through the year.

This course is intended for advanced students and will be arranged to suit their needs.

5. Exploratory Surveying.

Twice weekly, for a third of a year.

This course will be given jointly by Dr. Harry F. Reid, Associate Professor of Geological Physics, and Dr. Poor. It will include simple methods of finding geographical positions, photographic surveying, plane table surveying, etc. Practice will be had with the use of the instruments.

The Astro-Physical Seminary.

Weekly, through the year.

This will be under the direction of Dr. Ames, as announced under Physics.

Practical Work with the Instruments.

Daily, through the year.

This will be carried on by Dr. N. E. Dorsey, under the direction of Dr. Poor.

Undergraduate Course.

General Astronomy.

Two hours weekly, through the year. Dr. POOR.

This is an elective course for third-year students. It embraces an historical sketch of the development of the science, and an outline of the present state of our knowledge of the constitution and motions of the celestial bodies. The use of the principal instruments is explained, and some practice is had with the equatorial.

C. Undergraduate Mathematics.

Major Course.

Determinants.

Four hours weekly, until October 19. Professor HULBURT.

Differential and Integral Calculus (special topics).

Four hours weekly, October 20 to December 23. Professor HULBURT.

Elementary Theory of Equations.

Four hours weekly, January 3 to February 10. Professor HULBURT.

Elements of Projective Geometry.

Four hours weekly, February 14 to March 31. Professor HULBURT.

Analytic Geometry of Three Dimensions.

Four hours weekly, April 4 to the end of the year. Professor HULBURT.

Minor Course.

Analytic Geometry.

Four hours weekly, until December 23. Professor HULBURT.

Differential and Integral Calculus.

Four hours weekly, January 3 to the end of the year. Professor HULBURT.

For Candidates for Matriculation.

Algebra (special topics); Solid Geometry; Plane Trigonometry; Analytic Geometry (straight line and loci).

Four hours weekly, through the year. Dr. COHEN.

Elective Courses.

Differential Equations.

Two hours weekly, through the year. Dr. COHEN.

General Astronomy. [See above, under Astronomy.]

DEGREES CONFERRED JUNE 14, 1898.

The public exercises of Commencement were held in the Academy of Music at 4 p. m., Tuesday, June 14, 1898. Degrees were conferred on forty-three bachelors of arts, thirty-three doctors of philosophy, and twenty-two doctors of medicine, and certificates were given to nine proficient in Applied Electricity (see lists below.) The honors of the year and the recent appointments were announced by the President (see page 83 of this Circular.) In the evening the President and Faculty received the graduates and their friends in McCoy Hall.

DOCTORS OF PHILOSOPHY.

CLEVELAND ABBE, JR., of Washington, D. C., A. B., Harvard University, 1894. *Subjects:* Geology, Petrography, and Biology. *Dissertation:* Some Maryland Rivers and their Development: A Contribution to the Physiographic History of Maryland. *Referees on dissertation:* Professors Clark and Reid and Dr. Mathews.

HOWARD BELL ARBUCKLE, of Lewisburg, W. Va., A. B., Hampden-Sidney College, 1889. *Subjects:* Chemistry, Physiology, and Biology. *Dissertation:* A Redetermination of the Atomic Weights of Zinc and Cadmium. *Referees on dissertation:* Professors Remsen and Morse.

ARTHUR HENRY BAXTER, of Florence, Italy, A. B., Johns Hopkins University, 1894. *Subjects:* Italian, French, and History. *Dissertation:* The Introduction of Classical Metres into Italian Poetry, and their Development to the Beginning of the Nineteenth Century. *Referees on dissertation:* Professor Elliott and Dr. L. E. Menger, of Bryn Mawr College.

ERNEST JULIUS BECKER, of Baltimore, A. B., Johns Hopkins University, 1894. *Subjects:* English, German, and French. *Dissertation:* A Comparative Study of the Mediaeval Visions of Heaven and Hell, with special Reference to the Visions occurring in the Literature of England. *Referees on dissertation:* Professors Bright, Browne, and Bloomfield.

CHARLES HILLMAN BROUGH, of Ogden, Utah, A. B., Mississippi College, 1894. *Subjects:* Economics, History, and Jurisprudence. *Dissertation:* Irrigation in Utah. *Referees on dissertation:* Professor Sherwood and Dr. Hollander.

MURRAY PEABODY BRUSH, of Columbus, O., A. B., Princeton University, 1894. *Subjects:* French, Italian, and German. *Dissertation:* The *Isopo Laurenziano*, edited with Notes and an Introduction treating of the Interrelation of Italian Fable Collections. *Referees on dissertation:* Professor Elliott and Dr. Keidel.

KILLIS CAMPBELL, of Enfield, Va., A. B., William and Mary College, 1894. *Subjects:* English, German, and French. *Dissertation:* A Study of the Romance of the *Seven Sages*, with special reference to the Middle English Versions. *Referees on dissertation:* Professors Bright, Browne, and Bloomfield.

CHARLES GILPIN COOK, of Glenville, Md., S. B., Haverford College, 1892. *Subjects:* Chemistry, Geology, and Physics. *Dissertation:* Some Double Halides of Tin with the Aliphatic Amines and with Tetramethylammonium. *Referees on dissertation:* Professors Remsen and Morse.

FREDERICK HENRY DURYEA CRANE, of Montclair, N. J., A. B., Union College, 1893. *Subjects:* Chemistry, Physiology, and Physics. *Dissertation:* A Contribution to the Knowledge of Tellurium. *Referees on dissertation:* Professors Remsen and Morse.

GILMAN ARTHUR DREW, of Newton, Iowa, S. B., Iowa State University, 1890. *Subjects:* Zoölogy, Physiology, and Botany. *Dissertation:* The Anatomy, Habits, and Embryology of *Yoldia limatula*, Say. *Referees on dissertation:* Professors Brooks and Andrews.

WILLIAM ALEXANDER ECKELS, of Carlisle, Pa., A. B., Dickinson College, 1883. *Subjects:* Greek, Latin, and English. *Dissertation:* *Ἔπος* as an Index of Style in the Orators. *Referees on dissertation:* Professors Gildersleeve and Miller.

JOHN EIESLAND, of Greenville, Pa., A. B., University of South Dakota, 1891. *Subjects:* Mathematics, Physics, and Astronomy. *Dissertation:* On a certain Class of Functions with Line-Singularities. *Referees on Dissertation:* Professors Craig and Chessin.

CHARLES WILSON GREENE, of Stanford University, Cal., A. B., Leland Stanford Jr. University, 1892. *Subjects:* Physiology, Zoölogy, and Physics. *Dissertation:* On the Relations of the Inorganic Salts found in Blood to the Automatic Activity of a Strip of Cardiac Muscle. *Referees on Dissertation:* Professors Howell, Brooks, and Abel.

JAMES GRAHAM HARDY, of Easton, Pa., A. B., Lafayette College, 1894. *Subjects:* Mathematics, Physics, and History of Philosophy. *Dissertation:* On One-Variable Displacements in a Space of Four Dimensions, and on Curves of Triple Curvature. *Referees on Dissertation:* Professors Craig and Chessin.

LANCELOT MINOR HARRIS, of Bloomington, Ind., A. B., Washington and Lee University, 1888. *Subjects:* English, German, and History. *Dissertation:* Studies in the Anglo-Saxon Version of the Gospels. *Referees on dissertation:* Professors Bright and Browne.

CALEB NOTBOHM HARRISON, of Milwaukee, Wis., B. C. E., University of Wisconsin, 1882. *Subjects:* Physics, Astronomy, and Mathematics. *Dissertation:* The Arc-Spectra of the Elements Lanthanum, Vanadium, Zirconium. *Referees on dissertation:* Professors Rowland, Ames, and Duncan.

CHARLES HOEING, of Lexington, Ky., A. B., Kentucky State College, 1890. *Subjects:* Latin, Greek, and Sanskrit. *Dissertation:* The Codex Dunelmensis of Terence. *Referees on dissertation:* Professors Warren and Smith.

WILLIAM APP JONES, of Hillsboro, N. C., A. B., Wake Forest College, 1893. *Subjects:* Chemistry, Geology, and Mineralogy. *Dissertation:* A Contribution to the Knowledge of Dicarboxyl Cuprous Chloride. *Referees on dissertation:* Professors Remsen and Morse.

PERCY LEWIS KAYE, of Iowa City, Iowa, A. B., Iowa State University, 1895. *Subjects:* History, Politics, and Economics. *Dissertation:* The Colonial Executive Prior to the Restoration. *Referees on dissertation:* Professor Adams and Dr. Steiner.

SAMUEL SHIPMAN KINGSBURY, of Pittsburg, Pa., A. B., Marietta College, 1893. *Subjects:* Greek, Latin, and Sanskrit. *Dissertation:* A Rhetorical Study of the Style of Andocides. *Referees on dissertation:* Professors Gildersleeve and Miller.

GUY CARLETON LEE, of Chapel Hill, N. C., A. B., Dickinson College, 1895. *Subjects:* History, Jurisprudence, and Politics. *Dissertation:* Hincmar: An Introduction to the Study of the Revolution in the Organization of the Church of the Ninth Century. *Referees on dissertation:* Professors Adams and Vincent.

ARTHUR GRAY LEONARD, of Oberlin, O., A. B., Oberlin College, 1889. *Subjects:* Geology, Paleontology, and Biology. *Dissertation:* The Basic Rocks of Northeastern Maryland and their Relation to the Granite. *Referees on dissertation:* Professors Clark and Reid and Dr. Mathews.

CHARLES ELWOOD MENDENHALL, of Worcester, Mass., S. B., Rose Polytechnic Institute, 1894. *Subjects:* Physics, Mathematics, and Astronomy. *Dissertation:* A Bolometric Study of the Spectrum of an Absolutely Black Body between the Temperatures of 300° and 1100° Centigrade. *Referees on dissertation:* Professors Rowland, Ames, and Duncan.

SAMUEL ALFRED MITCHELL, of Kingston, Ont., A. M., Queen's University (Ont.), 1894. *Subjects:* Astronomy, Physics, and Mathematics. *Dissertation:* I. The Theory of the Concave Grating; II. Use of the Concave Grating in Stellar Spectroscopy. *Referees on dissertation:* Professors Poor and Ames.

CLEOPHAS CISNEY O'HARRA, of Carthage, Ill., A. B., Carthage College, 1891. *Subjects:* Geology, Petrography, and Biology. *Dissertation:* The Geology of Allegany County, Maryland. *Referees on dissertation:* Professors Clark and Reid and Dr. Mathews.

DANIEL ALLEN PENICK, of Austin, Texas, A. B., University of Texas, 1891. *Subjects:* Greek, Latin, and Sanskrit. *Dissertation:* Herodotus in the Renaissance. *Referees on dissertation:* Professors Gildersleeve and Spieker.

THOMAS DOBBIN PENNIMAN, of Baltimore, A. B., Johns Hopkins University, 1892. *Subjects:* Physics, Electricity, and Astronomy. *Dissertation:* Some New Methods for the Determination and Comparison of Self Inductance, Mutual Inductance, and Capacity, together with some Actual Measurements. *Referees on dissertation:* Professors Rowland, Ames, and Duncan.

EDWARD RHOADS, of Germantown, Pa., S. B., Haverford College, 1893. *Subjects:* Physics, Chemistry, and Mathematics. *Dissertation:* The Effect of the Fibrous Structure of Sheet Iron on the Changes in Length accompanying its Magnetization. *Referees on dissertation:* Professors Rowland, Ames, and Duncan.

GARNETT RYLAND, of Richmond, Va., A. M., Richmond College, 1892. *Subjects:* Chemistry, Physics, and Mathematics. *Dissertation:* A Contribution to the Study of Liquid Mixtures of Constant Boiling Point. *Referees on dissertation:* Professors Remsen and Morse.

ARISTOGEITON MARCUS SOHO, of Annapolis, Md., Syra (Greece) Gymnasium. *Subjects:* Greek, French, and Latin. *Dissertation:* Did the Lion exist in Greece within Historic Times? *Referees on dissertation:* Professor Gildersleeve and Professor Theodore Gill, of Washington.

CHARLES WILLIAM WADNER, of Baltimore county, A. B., Johns Hopkins University, 1896. *Subjects:* Physics, Mathematics, and Astronomy. *Dissertation:* A Recalculation of the Mechanical Equivalent of Heat. *Referees on dissertation:* Professors Rowland, Ames, and Duncan.

RICHARD HENRY WILSON, of Baltimore, A. B., Johns Hopkins University, 1892. *Subjects*: French, Spanish, and History. *Dissertation*: The Proposition A: The Relation of its Meanings studied in Old French. *Referees on dissertation*: Professors Elliott and Rambeau.

ALBERT FRANCIS ZAHM, of Washington, D. C., A. M., University of Notre Dame, 1885. *Subjects*: Physics, Mathematics, and Chemistry. *Dissertation*: Determination of the Resistance of the Air at Speeds of 200 to 500 Miles an Hour, with Notes on Two New Methods of Measuring Projectile Velocities inside and outside the Gun. *Referees on dissertation*: Professors Rowland, Ames, and Duncan.

(33)

DOCTORS OF MEDICINE.

WILLIAM STEVENSON BAER, of Baltimore, A. B., Johns Hopkins University, 1894.

WILLIAM JEPHTHA CALVERT, of Lexington, Ky., A. B., University of Kentucky, 1893, Graduate Student, Kentucky State College, 1893-94.

PATRICK JOSEPH CASSIDY, of Norwich, Conn., A. B., Yale University, 1894.

JOHN WILLIAMS COE, of Meriden, Conn., Ph. B., Yale University, 1893.

PERCY MILLARD DAWSON, of Montreal, Canada, A. B., Johns Hopkins University, 1894.

ARTHUR WELLS ELTING, of Upper Red Hook, N. Y., A. B., Yale University, 1894.

WILLIAM WEBER FORD, of Baltimore, A. B., Adelbert College, 1893.

THOMAS WOOD HASTINGS, of Morristown, N. J., A. B., Johns Hopkins University, 1894.

ALFRED BIRCH HERRICK, of Amsterdam, N. Y., A. B., Williams College, 1894.

JAMES HALL MASON KNOX, JR., of Baltimore, A. B., Yale University, 1892, and Ph. D., 1894; A. M., Lafayette College, 1896.

MILLARD LANGFELD, of Baltimore, A. B., Johns Hopkins University, 1893.

GERTRUDE UNDERHILL LIGHT, of Milwaukee, Wis., S. B., University of Wisconsin, 1894.

JAMES DANIEL MADISON, of Mazomanie, Wis., S. B., University of Wisconsin, 1894.

HARRY TAYLOR MARSHALL, of Baltimore, A. B., Johns Hopkins University, 1894.

ROGER GRISWOLD PERKINS, of Schenectady, N. Y., A. B., Union College, 1893, and Harvard University, 1894.

KATHERINE PORTER, of Baltimore, A. B., Bryn Mawr College, 1894.

JOSEPH HERSEY PRATT, of North Middleboro, Mass., Ph. B., Yale University, 1894.

GEORGIANA SANDS, of Port Chester, N. Y., A. B., Vassar College, 1893; Graduate Student, Barnard College (N. Y.), 1893-94.

BENJAMIN ROBINSON SCHENCK, of Syracuse, N. Y., A. B., Williams College, 1894.

WALTER RALPH STEINER, of Baltimore, A. B., Yale University, 1892, and A. M., 1895; Graduate Student, Johns Hopkins University, 1892-94.

EMMA ELIZABETH WALKER, of Parkersburg, W. Va., A. B., Smith College, 1887.

ANDREW HENDERSON WHITRIDGE, of Baltimore, S. B., Harvard University, 1894.

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PROFICIENTS IN APPLIED ELECTRICITY.

GEORGE EDWARD BARTELL, of Baltimore.

WILLIAM BURKE BRADY, of Harrisburg, Pa., M. E., Lehigh University, 1897.

EDMUND FRANK, of Petersburg, Ind., S. B., Rose Polytechnic Institute, 1897.

WILLIAM SCHROFIELD GORSUCH, JR., of Baltimore.

RICHARD CAMERON HALDEMAN, of Harrisburg, Pa., A. B., Yale University, 1896.

WILLIAM LEMMON HODGES, of Baltimore.

FERDINAND BRAUNS KEIDEL, of Catonsville, Md.

BERTRAM MOTTER KERSHNER, of Emmitsburg, Md.

CHARLES J. SPENCER, of Baltimore.

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RECENT APPOINTMENTS AND HONORS,
ANNOUNCED JUNE 14, 1898.

The following promotions and appointments have recently been made by the Trustees:—

JOSEPH S. AMES, Ph. D., now Associate Professor, to be Professor of Physics.

BERT J. VOS, Ph. D., now Associate, to be Associate Professor of German.

ABRAHAM COHEN, Ph. D., now Instructor, to be Associate in Mathematics.

J. ELLIOTT GILPIN, Ph. D., now Instructor, to be Associate in Chemistry.

HARRY C. JONES, Ph. D., now Instructor, to be Associate in Physical Chemistry.

THOMAS S. BAKER, Ph. D., now Instructor, to be Associate in German.

GEORGE C. KEIDEL, Ph. D., now Instructor, to be Associate in Romance Languages.

JAMES C. BALLAGH, Ph. D., now Instructor, to be Associate in History.

Also the following promotions, recommended by the Medical Faculty:

Dr. THOMAS C. GILCHRIST, now Associate, to be Clinical Professor of Dermatology.

Dr. J. WILLIAMS LORD, now Associate, to be Clinical Professor of Dermatology.

Dr. LOUIS E. LIVINGOOD, now Assistant, to be Associate in Pathology.

ADAM T. BRUCE FELLOW.

GILMAN ARTHUR DREW, of Newton, Iowa, S. B., Iowa State University, 1890; Ph. D., Johns Hopkins University, 1898, and late Fellow in Zoölogy.

FELLOWS.

THOMAS SEWELL ADAMS, of Baltimore, A. B., Johns Hopkins University, 1896. *Economics*.

JOHN WILLIAM BASORE, of Broadway, Va., A. B., Hampden-Sidney College, 1893. *Latin*.

FRANK RINGGOLD BLAKE, of Baltimore, A. B., Johns Hopkins University, 1897. *Sanskrit*.

PIERCE BUTLER, of New Orleans, La., A. B., Tulane University, 1892. *English*.

JOSEPH SCUDDER CHAMBERLAIN, of Hudson, O., S. B., Iowa Agricultural College, 1890. *Chemistry*.

PERCY MILLARD DAWSON, of Montreal, Canada, A. B., Johns Hopkins University, 1894, and M. D., 1898. *Physiology*.

GEORGE STRONACH FRAPS, of Raleigh, N. C., S. B., North Carolina Agricultural College, 1896. *Chemistry*.

PIERRE JOSEPH FREIN, of Gt. Barrington, Mass., A. B., Williams College, 1892. *Romance Languages*.

LEONIDAS CHALMERS GLENN, of Crowder's Creek, N. C., A. B., University of South Carolina, 1891. *Geology*.

CASWELL GRAVE, of Monrovia, Ind., S. B., Earlham College, 1895. *Zoology*.

KARL JOSEF GRIMM, of Baltimore. *Semitic Languages*.

HOLLISTER ADELBERT HAMILTON, of Rochester, N. Y., A. B., University of Rochester, 1892. *Greek*.

GEORGE OSCAR JAMES, of Bowers Hill, Va., A. B., Johns Hopkins University, 1895. *Mathematics*.

WILLIAM KURRELMMEYER, of Baltimore, A. B., Johns Hopkins University, 1896. *German*.

JOSEPH FRANCIS MERRILL, of Richmond, Utah, S. B., University of Michigan, 1893. *Physics*.

ALFRED WILLIAM MILDEN, of Cornwall, Ont., A. B., University of Toronto, 1888. *Greek*.

EUGENE LINDSAY OPIE, of Baltimore, A. B., Johns Hopkins University, 1893, and M. D., 1897. *Pathology*.

FREDERICK ALBERT SAUNDERS, of Ottawa, Canada, A. B., University of Toronto, 1895. *Physics*.

LAURENCE FREDERICK SCHMECKEBIER, of Baltimore, A. B., Johns Hopkins University, 1896. *History*.

HENRY SKINNER WEST, of Baltimore, A. B., Johns Hopkins University, 1893. *English*.

In case a vacancy arises, THOMAS MADISON JONES, of Doe Hill, Va., A. B., Randolph Macon College, 1894, is to be appointed in the department of Latin.

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W. M. BLANCHARD (A. B., Randolph Macon College, 1894), of Hartford, N. C.

HALL CANTER (A. B., Randolph Macon College, 1892), of Ashland, Va.

C. C. GLASCOCK (University of Virginia, 1892), of Buckland, Va.

C. C. HOLDEN (A. B., Johns Hopkins University, 1888), of Raleigh, N. C.

WALTER HULLIHEN (A. B., University of Virginia, 1896), of Staunton, Va.

J. W. KERN (University of Virginia, 1881), of Alexandria, Va.

D. P. PARHAM (A. M., Randolph Macon College, 1891), of Hampton, Va.

G. W. RUSSELL (A. B., Randolph Macon College, 1892), of Onancock, Va.

C. W. SOMMERVILLE (A. B., Hampton-Sidney College, 1890), of White Post, Va.

G. T. SURFACE (S. B., Virginia Polytechnic Institute, 1895), of Blacksburg, Va.

J. B. WHAREY (A. B., Davidson College, 1892), of Mooresville, N. C.

J. H. C. WINSTON (A. B., Hampton-Sidney College, 1894), of Farmville, Va.

Scholarships:

W. M. ALLEN (S. B., Rutherford College), of Wadesboro, N. C.

G. E. BARNETT (A. B., Randolph Macon College, 1891), of Mocksville, N. C.

W. N. BERKELEY (S. B., St. John's College, 1896), of Charlottesville, Va.

R. M. BIRD (A. B., Hampden Sidney College, 1897), of Petersburg, Va.

I. H. BLACKWELL (A. B., Randolph Macon College, 1895), of Bedford City, Va.

W. C. COKER, JR. (S. B., South Carolina College, 1894), of Wilmington, N. C.

W. S. DREWRY (A. B., University of Virginia, 1893), of Fayetteville, N. C.

W. L. FOCUSHEE (A. M., Wake Forest College, 1894), of Roxboro, N. C.

J. C. HERRICK (A. B., University of Virginia, 1896), of the University of Va.

CARL KINSLEY (A. B., Oberlin College), of Falls Church, Va.

C. H. LITTLE (A. B., Roanoke College, 1893), of Hickory, N. C.

R. E. LOVING (A. B., Richmond College, 1896), of Richmond, Va.

D. E. MOTLEY (A. B., Milligan College, Tenn., 1894), of Chatham, Va.

W. S. MYERS (A. B., University of North Carolina, 1897), of Asheville, N. C.

C. L. RAPER (A. B., Trinity College, N. C., 1892), of Greensboro, N. C.

GEORGE RAGLAND (A. B., Richmond College, 1896), of Richmond, Va.

C. C. WEAVER (A. B., Trinity College, N. C., 1895), of Greensboro, N. C.

F. D. WILSON (S. B., Virginia Polytechnic Institute, 1894), of Chatham, Va.

HONORS OF THE UNDERGRADUATES.

The standing of students in the class about to graduate, who are entitled to honors, is as follows:

JOSEPH NATHAN ULMAN.

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HENRY JOHN LUCKE.

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VICTOR EDGEWORTH SMITH.

ALEXANDER LAZEAR SETH.

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THOMAS FITZGERALD, JR.

In accordance with the regulations, University Scholarships are awarded to the first ten students named above, who stand first in point of scholarship.

The standing of students of the second year who are entitled to honors, is as follows:

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WILLIAM LEAVELL ROSS.

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HENRY CARTER DOWNES.

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LAWRENCE ANTON REYMAN.

WALTER MARSHALL KRAGER.

JAMES MORFIT MULLEN.

JOHN PHILIP HILL.

LEONARD KEENE HIRSHBERG.

The standing of students of the first year who are entitled to honors, is as follows:

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JOHN HOWARD EAGER, JR.

ROBERT BRUCE ROULSTON.

DONALD MACY LIDDELL.

JOHN WHEELER GRIFFIN.

CHARLES EDWARD BROOKS.

HOWARD BAETJER.

JARED SPARES MOORE.

FRANK PEXTON ROUS.

SOLOMON POWERS SMITH.

JAMES LUTHER ALBERT BURRELL.

LEONARD LEOPOLD MACKALL.

The Hopkins Scholarships, which are awarded to residents of Maryland only, are bestowed as follows:

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Honorary Scholarships:

JOHN CALVIN FRENCH.

HARRY SELIGER GREENBAUM.

HERMAN KURRELMMEYER.

EDWIN ALBERT SPILMAN.

Scholarship:

ROBERT LEE RAMSAY.

FIRST YEAR.

Honorary Scholarships:

EDWARD PECHIN HYDE.

JOHN HOWARD EAGER, JR.

ROBERT BRUCE ROULSTON.

Scholarships:

JOHN WHEELER GRIFFIN.

CHARLES EDWARD BROOKS.

JOHNS HOPKINS MEDICAL SCHOOL.

The session begins October 1 and extends to June 15.

The Annual Announcement of the Medical School is now ready, and will be sent on application. Announcements of the courses for graduates in medicine will also be sent on application.

STAFF.

<i>Anatomy</i>	{ F. P. MALL, M. D., Professor.
	{ L. F. BARKER, M. B., Associate Professor.
	{ J. W. LORD, M. D., Instructor.
	{ R. G. HARRISON, PH. D., Associate.
	{ C. R. BARDEEN, M. D., Assistant.
<i>Physiology</i>	{ W. H. HOWELL, PH. D., M. D., Professor.
	{ G. P. DREYER, PH. D., Associate.
<i>Physiological Chemistry</i>	{ J. J. ABEL, M. D., Professor.
	{ WALTER JONES, PH. D., Assistant.
<i>Pharmacology and Toxicology</i>	{ J. J. ABEL, M. D., Professor.
	{ REID HUNT, PH. D., M. D., Associate.
	{ A. C. CRAWFORD, M. D., Assistant.
<i>Pathology and Bacteriology</i>	{ W. H. WELCH, M. D., LL. D., Professor.
	{ SIMON FLEXNER, M. D., Associate Professor.
	{ L. E. LIVINGOOD, M. D., Associate.
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	{ N. MACL. HARRIS, M. B., Assistant.
	{ W. G. MACCALLUM, M. D., Assistant.
<i>Medicine</i>	{ WILLIAM OSLER, M. D., LL. D., Professor.
	{ W. S. THAYER, M. D., Associate Professor.
	{ T. B. FUTCHER, M. B., Associate.
	{ F. R. SMITH, M. D., Instructor.
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<i>Surgery</i>	{ W. S. HALSTED, M. D., Professor.
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	{ H. W. CUSHING, M. D., Instructor.
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<i>Gynecology</i>	{ H. A. KELLY, M. D., Professor.
	{ W. W. RUSSELL, M. D., Associate.
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	{ G. W. DOBBIN, M. D., Assistant.
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<i>Pædiatrics</i>	{ W. D. BOOKER, M. D., Clinical Professor.
	{ S. L. PATON, M. D., Assistant.
<i>Neurology</i>	H. M. THOMAS, M. D., Clinical Professor.
<i>Laryngology and Rhinology</i>	{ J. N. MACKENZIE, M. D., Clinical Professor.
	{ SAMUEL THEOBALD, M. D., Clinical Professor.
<i>Ophthalmology and Otology</i>	{ R. L. RANDOLPH, M. D., Associate.
	{ J. W. LORD, M. D., Clinical Professor.
<i>Dermatology</i>	{ T. C. GILCHRIST, M. D., Clinical Professor.
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II. American Chemical Journal.

This journal was commenced in 1879, with Professor Remsen as Editor. Nineteen volumes of about 450 pages each have been issued, and the twentieth is in progress. Ten numbers are issued yearly. Subscription \$4 per year. Single numbers 50 cents.

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